

REMARKS

By this Amendment the claim 1 has been amended to address the examiner's rejection of claims 1-6 under 35 U.S.C. 112, and claims 2-6 have been amended to improve their introductory wording. Entry is requested.

In the outstanding final Office Action the examiner has again rejected claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over WO 00/55567.¹ The applicants again assert that this rejection is incorrect.

WO 00/55567 relates to the use of metal foam in an armour system, useful for military vehicles, a shock energy-absorbing element for multi-layer armour systems with a metallic foam, and multi-layered steel armour including front-face ballistic-resistant armour layer (high strength strike plate), a backing armour layer (backing plate), and an intermediate layer-shock energy-absorbing element of a metallic foam. This intermediate layer is made from a metallic foam having a porosity of 50-98 wt%.

Thus, WO 00/55567 refers to the use of metallic foams as the absorbing element of the armour systems, whose aim is absorption of energy - shock waves - with multilayered, sandwich-type armour systems, where the metallic foam is inserted between the front-face high

¹ The examiner refers to this document as Claar et al. (Claar). More correctly, it should be referred to as Yu et al.

strength plate made of ceramic, metal or composites, and a backing tough plate.

The metallic foams, with closed cells with porosity of 50 to 98%, is selected from aluminum, steel, lead, zinc, titanium, nickel and alloys, which absorbs the energy during deformation and which is bonded together by adhesive bonding or alternatively into the system.

Yet, from the character of the metallic foam, with this high porosity, it cannot be presupposed that metallic foam layer is metallurgically bonded on the whole surface with the front-face plate and the backing plate. It is possible to presume that the porous layer according this invention would be very harmful because its deformation would result in a total destruction of the tough front-face layer and the system disintegration.

In the present invention, between a front-face ballistic-resistant armour layer and a backing armour layer, is inserted at least one joining metallic intermediate layer having a face-centered cubic crystalline lattice (FCC), not a porous material considering this feature as one of the determining material features of this joining metallic intermediate layer of the invention, because technically significant metals generally most often crystallize apart from this cubic system also in hexagonal and tetragonal systems.

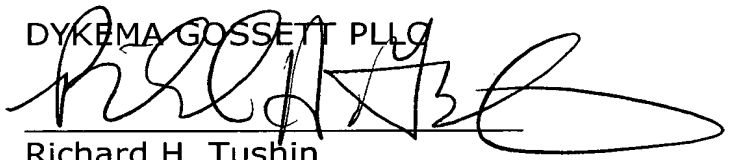
This homogeneous joining metallic intermediate layer of the present invention aims, by this metallurgical bonding on the whole surface, to reach for high adhesion value of all separate layers and at the same time, at manufacture, to eliminate deformation of all these layers as a result of structural and thermal dimensional changes of separate layers during giving these materials desired shape and thermal treatment of materials with different properties.

The examiner's prior art rejection should be withdrawn and amended claims 1-6 allowed.

Respectfully submitted,

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